

# Exhibit A

*Excerpts of Supplemental  
Report of Dr. Barber*

# Supplemental Expert Report of Michael Barber, PhD

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## 5 Apportionment Analysis

In his reply report, Mr. Fairfax misstates my original critique and claims that I was suggesting that there are no alternative ways to configure districts in the county groupings he identified that would reduce population deviations. That is incorrect. My original critique was that while he claimed that there were “several options that would allow me to shift one or two VTDs that would bring the district population closer to the ideal population and the overall population deviation closer to zero” (Fairfax Report, pg. 68), he chose not to provide any examples that would illustrate this point. This made it impossible for me to evaluate any alternative configurations and whether such alternatives would be able to accomplish the same non-population objectives while reducing population deviations across districts within county groupings.<sup>19</sup>

In his reply report, Mr. Fairfax produces an alternative configuration of district boundaries that reduce population deviations in the county clusters he identifies as problematic. These changes, he states, “result in similar or better redistricting criteria metrics” (Fairfax Reply Report, pg. 6). However, Mr. Fairfax fails to consider the partisan implications of these changes, and these alternative district alignments universally reduce the Republican lean of swing districts throughout the state. Therefore, these alternatives do not accomplish the objective of reducing population deviations while maintaining the status quo on other valid redistricting criteria, and in fact, Mr. Fairfax’s changes in population appear to universally benefit the Democratic Party in districts that will likely be competitive in future elections. I will consider them one at a time and show, using the 2024 partisan index of statewide elections, that Mr. Fairfax’s alternative district configurations are worse for Republican candidates across the board.

In the Brunswick-New Hanover Senate cluster, Mr. Fairfax moves one precinct (W15 in Wilmington) from SD-8 to SD-7. Table 8 below shows the population and partisan

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<sup>19</sup>I was asked about this critique and Mr. Fairfax’s alternatives in his reply report in my deposition at pages 206-215

implications of this change. District 7 is slightly less Republican leaning (by approximately 0.74%). While this might seem like a small difference, the district is already very competitive and will likely be decided by small margins in future elections. In 2024, the incumbent Republican candidate, Michael Lee, won the district with 52.21% of the vote. A shift of between half and 1 percentage point in a Democratic direction is a sizable shift in this type of district.

In the Iredell-Mecklenburg Senate cluster, Mr. Fairfax moves one precinct from SD-39 to SD-42 and then moves another precinct from SD-40 to SD-42. He does not alter the other three senate districts in the cluster, indicating to me that he does not find these districts to be problematic. The movement of two precincts into SD-42, however, has the partisan effect of making SD-42 more Democratic leaning. Table 8 below shows the population and partisan implications of this change. District 42 is slightly less Republican leaning (approximately 0.13%). While this might seem like a small difference, the district is also very competitive and will likely be decided by small margins in future elections. In 2024, the incumbent Democratic candidate, Woodson Bradley, won the district with 50.08% of the vote, beating her Republican challenger by just 209 votes. A shift of even one tenth of one percentage point in a Democratic direction is a sizable shift in this type of district.

In the Wake County House cluster, Mr. Fairfax moves one precinct (19-11) from HD-66 to HD-35 and another precinct (13-2) from HD-34 to HD-66. Table 6 below shows the population and partisan implications of this change. District 35 is slightly less Republican leaning (by approximately 0.32%). While this might seem like a small difference, the district is very competitive and will likely be decided by small margins in future elections. In 2024, the Republican candidate, Mike Schietzelt, won the district with 50.27% of the vote. A shift of one third of a percentage point in a Democratic direction is a sizable shift in this type of district. Mr. Fairfax makes no other changes to the 10 other house districts in the county cluster, including HD-37, the most overpopulated district in the cluster. I take this to indicate that he does not find these districts to be apportioned problematically.

Table 5: Population and Partisan Differences between Enacted Senate Districts and Fairfax Alternatives

District	2020 Population Deviation %	2024 Republican Partisan Lean %	2024 Republican Vote Share %
SD-7	-4.96	51.62	52.21
SD-7 Altered	-0.68	50.88	—
SD-8	2.76	58.23	59.9
SD-8 Altered	-1.5	59.02	—
SD-42	0.28	47.40	49.92
SD-42 Altered	2.44	47.27	—
SD-39	4.95	32.64	0
SD-39 Altered	3.97	32.53	—
SD-40	4.83	23.74	0
SD-40 Altered	3.65	23.47	—

Note: In SD-39 and SD-40 the 2024 Republican vote share is zero because no Republican candidates ran in those districts. However, the partisan lean shows the performance of statewide Republican candidates in those districts in 2024.

Table 6: Population and Partisan Differences between Enacted House Districts and Fairfax Alternatives

District	2020 Population Deviation %	2024 Republican Partisan Lean %	2024 Republican Vote Share %
HD-35	-4.48	50.56	50.27
HD-35 Altered	1.76	50.24	—
HD-66	1.98	35.11	0
HD-66 Altered	-0.97	34.73	—
HD-34	3.23	34.68	0
HD-34 Altered	-0.07	34.45	—
HD-75	0.44	54.70	56.95
HD-75 Altered	-1.49	51.87	—
HD-71	2.1	29.72	0
HD-71 Altered	-1.55	30.34	—
HD-91	-4.68	65.33	67.16
HD-91 Altered	0.90	65.99	—

Note: In HD-66, 34, and 71 the 2024 Republican vote share is zero because no Republican candidates ran in those districts. However, the partisan lean shows the performance of statewide Republican candidates in those districts in 2024.

In the Fosyth-Stokes House cluster, Mr. Fairfax moves one precinct from HD-75 to HD-91 and then moves another precinct from HD-71 to HD-75. He does not alter the other two house districts in the cluster, indicating to me that he does not find these districts to be problematic. The swapping of one precinct out of HD-75 with a different precinct into HD-75, however, has the partisan effect of making HD-75 more Democratic leaning. Table 6 below shows the population and partisan implications of this change. District 75 is less Republican leaning (approximately 2.8%). This is a sizable shift in the partisan composition of the district. In 2024, the Republican candidate, Donny Lambeth, won the district with 56.95% of the vote. A shift of more than two and a half percentage points in a Democratic direction would be a sizable partisan shift in this district.

The figures below also show that the apportionment in each of the clusters is not systematically associated with one party or the other. For example, in the Wake County House Cluster (Figure 7), the least populated and most populated districts are both represented by Republican legislators. In the Forsyth-Stokes House Cluster (Figure 8) there is also no association between the difference in apportionment and the party representing the district.

Similar figures for the Mecklenburg Senate Cluster (Figure 9) and the Brunswick-New Hanover Senate cluster (Figure 10) show no association between apportionment and partisanship. Tables 8-9 in the next section show the population deviation for all 50 Senate and 120 House districts, the party that won the seat, the 2024 election result in the district, and the racial composition of each district. Looking across the entire plan, there is also no association between partisanship or race and the degree to which a district is over or under-populated within the 5% allowable threshold.

## 5.1 House Clusters Population Deviation

Figure 7: Apportionment in Wake County House Districts and Incumbent Party in Each District

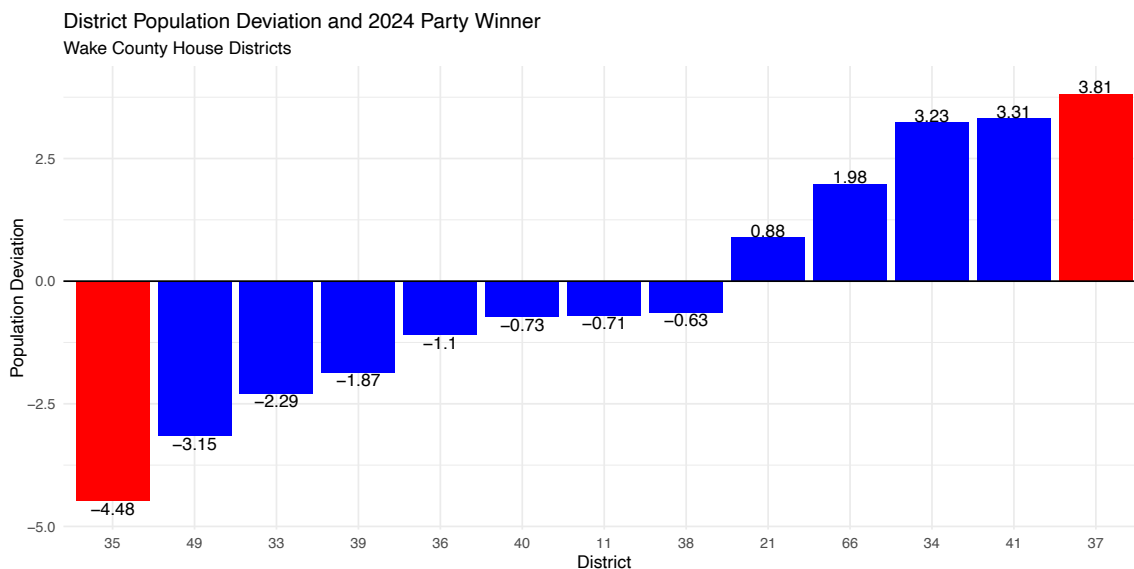
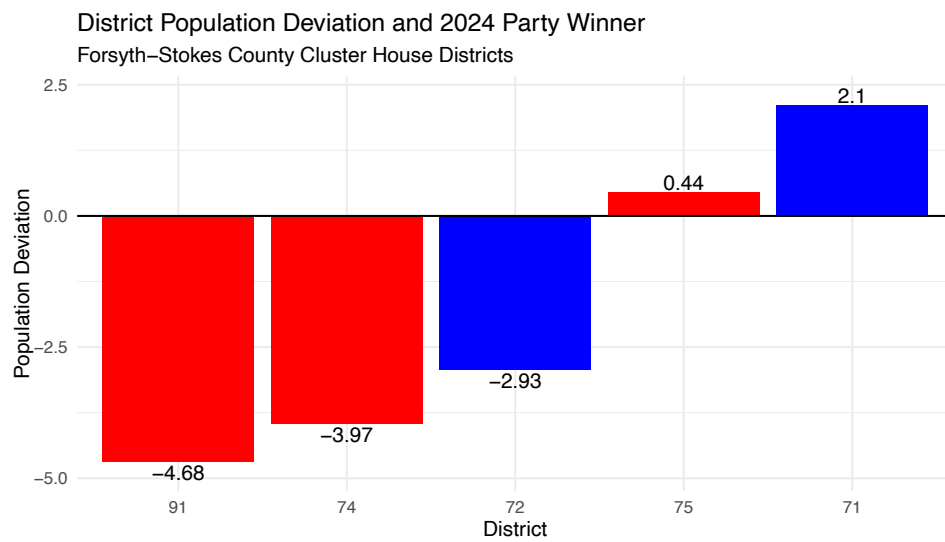




Figure 8: Apportionment in Forsyth-Stokes County House Districts and Incumbent Party in Each District



## 5.2 Senate Clusters Population Deviation

Figure 9: Apportionment in Iredell-Mecklenburg County Senate Districts and Incumbent Party in Each District

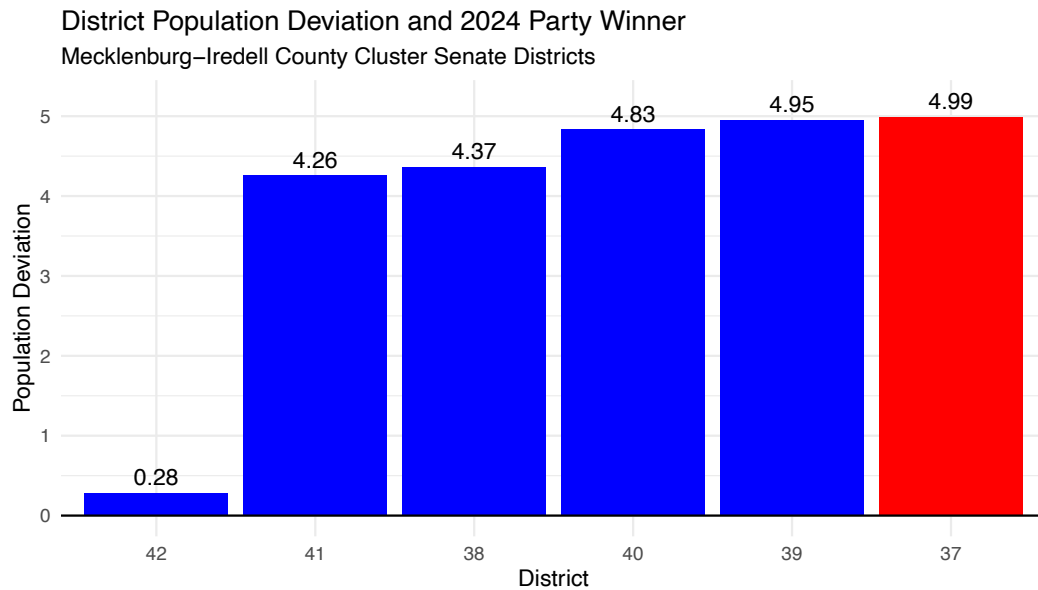
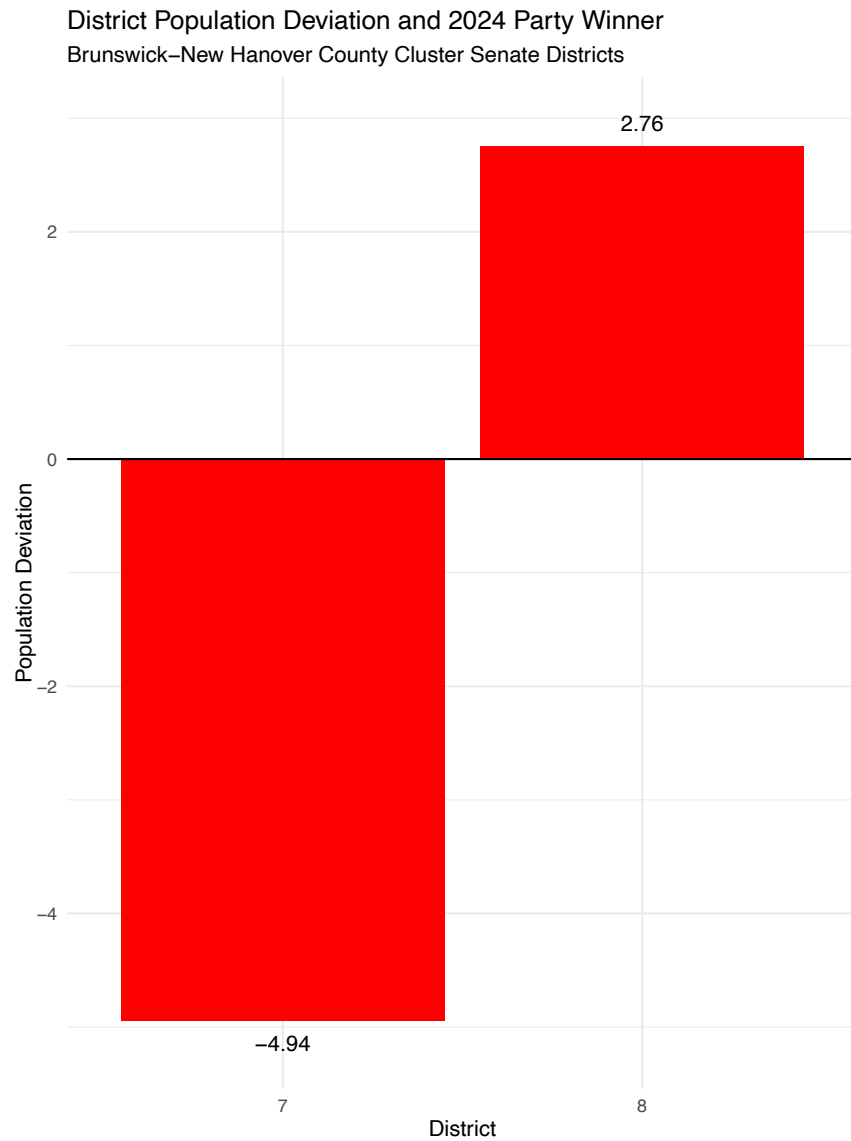


Figure 10: Apportionment in Brunswick-New Hanover County Senate Districts and Incumbent Party in Each District



## 6 Statewide Apportionment Tables

The tables below show population deviations for every district in both the Enacted Senate and House plans. The tables also indicate the Democratic vote share in the 2024 legislative elections in each district as well as the Black Voting Age Population in each district using the 2020 US Census data. Finally, the tables also show the population deviation of each district. Finally, each table shows the county cluster's average population deviation and the district's deviation from that average since some county clusters are already over or under-populated more than others.

Looking at each table, it is clear that there is no systematic association between the population deviation of the districts challenged by Mr. Fairfax and their partisan lean or racial composition. The challenged districts are all scattered across the tables. Some are over-populated and some are under-populated.<sup>20</sup>

In the Senate, it may appear that the challenged districts are mostly over-populated (SDs 41, 38, 40, 39, and 37). However, it is important to note that these districts are all in the Wake County cluster and that cluster started out overpopulated by 3.95% to begin with.

I also conduct a more systematic multiple regression analysis to see if partisanship, race, or the particular districts that are challenged by Mr. Fairfax are statistically associated with the population deviation of the district. To do this, I regress the population deviation of each district on variables measuring the vote share of the Democratic candidate in the 2024 election in each district, the 2020 BVAP of each district, and a variable indicating if Mr. Fairfax mentioned the district in his Apportionment Analysis section of his report. Finally, to account for the fact that the county groupings that constrain the map-drawing process do not all have equal population, I also include a variable measuring the average population deviation of each cluster.<sup>21</sup> The results of the regression analysis in both the House and

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<sup>20</sup>Of course, all of the districts are within the acceptable 5% range. When I say over- or under-populated, I mean over- or under-populated, but within the accepted 5% range.

<sup>21</sup>The average population deviation of the cluster is calculated by taking the total population of the cluster, dividing by the number of districts in that cluster, and then calculating the deviation of this number from the ideal district size.

Senate show that across each map the district’s population deviation is not associated with partisanship, race, or Mr. Fairfax’s choice of districts to discuss in his report. The only variable that is statistically significant (denoted by the ‘\*\*\*’ next to each coefficient) is the variable measuring the county cluster average population deviation. This makes sense given that districts that are drawn from county clusters that start out over (or under) populated are much more likely to themselves also be over (or under) populated.

Table 7: Regression Results

	<i>Dependent variable:</i>	
	2020 Population Deviation (House)	(Senate)
2024 Democratic Vote Share	0.001 (0.009)	−0.004 (0.012)
2020 BVAP	0.0004 (0.017)	0.013 (0.020)
County Cluster Avg. Pop. Deviation	1.000*** (0.074)	0.993*** (0.063)
Fairfax Challenged	−0.028 (0.558)	0.049 (0.635)
Constant	−0.068 (0.421)	−0.092 (0.521)
Observations	120	50
R <sup>2</sup>	0.624	0.872
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01		

Table 8: Senate District Population and Partisan Details

District	2024 Democratic Vote Share %	2020 BVAP %	2020 Population Deviation %	Single District Grouping	Cluster Avg. Population Deviation %	Deviation from Cluster Average %
18	48.47	20.18	-5		-4.98	-0.02
13	50.21	12.56	-4.99		-4.98	-0.01
15	65.95	20.83	-4.99		-4.98	-0.01
16	100	13.88	-4.98		-4.98	0
17	74.38	10.51	-4.97		-4.98	0.01
7	43.74	9.05	-4.94		-1.09	-3.85
14	73.46	44.18	-4.92		-4.98	0.06
2	41.81	30.01	-4.9	Yes	-4.9	0
1	42.79	29.49	-4.39	Yes	-4.39	0
22	85.98	34.77	-4.3		-3.94	-0.36
46	34.77	4.75	-4.28		-3.83	-0.45
48	36.07	5.51	-4.18	Yes	-4.18	0
3	40.01	26.66	-3.97	Yes	-3.97	0
12	38.39	20.61	-3.83		-3.35	-0.48
20	72.28	27.1	-3.58		-3.94	0.36
49	69.07	7.36	-3.38		-3.83	0.45
9	34.97	23.92	-2.87		-3.35	0.48
24	41.26	29.63	-2.87	Yes	-2.87	0
44	27.5	13.14	-2.75		-0.79	-1.96
6	30.37	15.33	-2.02	Yes	-2.02	0
47	35.85	3.01	-1.97		2.56	-4.53
11	48.71	36.65	-1.28	Yes	-1.28	0
42	50.08	9.86	0.28		3.95	-3.67
33	29.01	14.88	0.28	Yes	0.28	0
28	100	51.42	0.6		0.96	-0.36
23	65.85	16.73	0.83	Yes	0.83	0
27	60.79	26.01	0.85		0.96	-0.11
36	21.02	4.48	1.05	Yes	1.05	0
43	38.22	18.57	1.17		-0.79	1.96
30	24.69	9.21	1.37	Yes	1.37	0
32	68.97	35.3	1.42		2.28	-0.86
26	41.1	19.6	1.44		0.96	0.48
8	40.1	17.08	2.76		-1.09	3.85
34	44.19	19.76	2.97		4.22	-1.25
31	37.43	12.34	3.15		2.28	0.87
10	37.64	16.73	3.45	Yes	3.45	0
19	62.87	48.07	3.68		4.04	-0.36
4	44.88	35.02	3.73	Yes	3.73	0
25	39.75	17.77	4.15		4.22	-0.07
41	100	43.04	4.26		3.95	0.31
38	100	37.28	4.37		3.95	0.42
21	37.24	19.56	4.4		4.04	0.36
50	33.47	2.03	4.76		2.56	2.2
29	31.45	19.11	4.81		4.22	0.59
40	79.38	41.08	4.83		3.95	0.88
45	29.72	7.92	4.89		2.56	2.33
39	100	25.89	4.95		3.95	1
35	36.66	10.94	4.96		4.22	0.74
5	55.08	40.35	4.96	Yes	4.96	0
37	35.27	11.08	4.99		3.95	1.04

Note: Districts are colored green if they are identified in the “Apportionment Analysis” section of Mr. Fairfax’s report. Districts are colored Red/Blue based on party that won the 2024 election. Districts are colored orange if BVAP is greater than 35% using 2020 US Census Data.

Table 9: House District Population and Partisan Details

District	2024 Democratic Vote Share %	2020 BVAP %	2020 Population Deviation %	Single District Grouping	Cluster Avg. Population Deviation %	Deviation from Cluster Average %
44	62.28	44.36	-4.96		-3.81	-1.15
98	52.2	7.91	-4.83		-1.37	-3.46
1	34.94	18.46	-4.81		-3.73	-1.08
91	32.84	16.07	-4.68		-1.81	-2.87
55	37	26.75	-4.68		-0.25	-4.43
5	45.84	38.59	-4.65	Yes	-4.65	0
42	74.29	46.6	-4.63		-3.81	-0.82
10	39.21	32.4	-4.58		-4.56	-0.02
4	36.97	27.49	-4.55		-4.56	0.01
51	35.7	16.73	-4.51		-1.97	-2.54
35	47.08	12.7	-4.48		-0.13	-4.35
118	38.74	1.54	-4.27	Yes	-4.27	0
80	24.3	9.93	-4.26		-2.91	-1.35
53	37.07	16.75	-4.23		0.46	-4.69
24	51.1	38.5	-4.22		-0.14	-4.08
47	35.37	25.17	-4.07		-3.93	-0.14
54	54.76	11.6	-4.05		-1.97	-2.08
13	30.11	8.91	-4.02		-3.21	-0.81
74	48.18	10.18	-3.97		-1.81	-2.16
7	42.17	26.8	-3.97		-1.06	-2.91
104	55.96	12.31	-3.96		-1.37	-2.59
8	64.03	45.34	-3.95		-2.15	-1.8
46	0	26.83	-3.79		-3.93	0.14
45	100	40.34	-3.74		-3.81	0.07
63	44.97	20.69	-3.62		-1.48	-2.14
102	100	25.22	-3.21		-1.37	-1.84
49	100	13.34	-3.15		-0.13	-3.02
101	100	41.16	-3.02		-1.37	-1.65
52	38.93	23.07	-3		-1.97	-1.03
99	86.4	47.59	-2.98		-1.37	-1.61
72	100	40.12	-2.93		-1.81	-1.12
111	26.11	14.03	-2.86		2.35	-5.21
88	100	23.61	-2.86		-1.37	-1.49
79	36.76	17.08	-2.66		-3.73	1.07
27	100	51.88	-2.6	Yes	-2.6	0
12	41.37	38.48	-2.59	Yes	-2.59	0
120	24.84	1.31	-2.4	Yes	-2.4	0
3	38.32	20.2	-2.4		-3.21	0.81
33	80.19	41.21	-2.29		-0.13	-2.16
87	24.58	5.26	-2.28		-1.03	-1.25
16	29.16	11.72	-2.18		1.45	-3.63
56	86.29	11.25	-2.13		-1.47	-0.66
43	42.67	30.85	-1.91		-3.81	1.9
95	35.53	8.11	-1.87		-0.19	-1.68
39	100	34.22	-1.87		-0.13	-1.74
28	31.12	16.99	-1.85		0.46	-2.31
94	23.03	5.79	-1.64		-0.13	-1.51
89	24.01	7.02	-1.63		-0.19	-1.44
81	28.13	9.91	-1.56		-2.91	1.35
105	49.8	9	-1.52		-1.37	-0.15
36	54.52	9.37	-1.1		-0.13	-0.97
48	51.92	37.09	-0.85	Yes	-0.85	0
50	100	18.06	-0.81		-1.47	0.66
40	62.32	13.88	-0.73		-0.13	-0.6
78	23.54	5.77	-0.72		-1.97	1.25
11	64.65	11.36	-0.71		-0.13	-0.58
38	100	40.89	-0.63		-0.13	-0.5
9	44.05	26.25	-0.36		-2.15	1.79
106	100	45.99	-0.32		-1.37	1.05
100	100	27.85	-0.27		-1.37	1.1

Note: Districts are colored green if they are identified in the “Apportionment Analysis” section of Mr. Fairfax’s report. Districts are colored Red/Blue based on party that won the 2024 election. Districts are colored orange if BVAP is greater than 35% using 2020 US Census Data.

Table 9, Continued: House District Population and Partisan Details

District	2024 Democratic Vote Share %	2020 BVAP %	2020 Population Deviation %	Single District Grouping	Cluster Avg. Population Deviation %	Deviation from Cluster Average %
84	29.35	16.59	-0.26		-0.19	-0.07
97	0	5.81	-0.21	Yes	-0.21	0
92	100	37.63	0.1		-1.37	1.47
93	43.17	3.52	0.23		-1.03	1.26
112	100	46.97	0.26		-1.37	1.63
75	43.05	18.89	0.44		-1.81	2.25
86	27.95	6.41	0.66	Yes	0.66	0
64	45.16	20.93	0.66		-1.48	2.14
21	62.75	9	0.88		-0.13	1.01
90	22.1	3.68	1.39		-0.13	1.52
68	37.51	9.22	1.4		-0.25	1.65
67	24.97	13.37	1.45	Yes	1.45	0
14	33.88	14.64	1.7		1.45	0.25
32	48.95	39.64	1.85		-1.06	2.91
22	38.99	28.47	1.89	Yes	1.89	0
66	74.85	28.71	1.98		-0.13	2.11
71	100	32.41	2.1		-1.81	3.91
107	100	60.95	2.14		-1.37	3.51
23	56.46	53.41	2.15	Yes	2.15	0
115	51.46	2.74	2.16		3.24	-1.08
109	41.97	18.18	2.17		2.35	-0.18
70	23.83	7.38	2.44		-1.97	4.41
113	33.32	7.2	2.48		2.35	0.13
69	36.79	10.32	2.52		-0.25	2.77
103	58.07	13.21	2.71		-1.37	4.08
18	82.66	20.58	2.78		4.14	-1.36
116	100	10.64	2.83		3.24	-0.41
110	33.43	21.64	2.83		2.35	0.48
108	35.41	16.39	2.84		2.35	0.49
96	35.79	10.47	2.98		-0.19	3.17
62	46.55	14.93	3.04		3.7	-0.66
34	75.79	16.87	3.23		-0.13	3.36
76	37.63	20.99	3.24		4.05	-0.81
41	76.58	11.55	3.31		-0.13	3.44
26	41.72	17.78	3.39		0.46	2.93
73	46.79	21.31	3.5		4.05	-0.55
58	100	52.69	3.51		3.7	-0.19
61	78.87	43.82	3.66		3.7	-0.04
119	44.61	2.95	3.7	Yes	3.7	0
57	68.14	37.1	3.75		3.7	0.05
37	45.32	13.38	3.81		-0.13	3.94
60	63.18	35.22	3.85		3.7	0.15
25	47.86	39.97	3.95		-0.14	4.09
17	37.73	10.81	4.05		4.14	-0.09
77	20.92	5.8	4.18		4.05	0.13
2	57.58	30.69	4.32		4.58	-0.26
85	25.81	3.45	4.34		2.35	1.99
59	44.82	22.56	4.41		3.7	0.71
83	34.32	14.55	4.49		4.05	0.44
29	100	31.03	4.49		4.58	-0.09
6	39.36	23.49	4.51		0.46	4.05
117	42.25	3.77	4.64		2.35	2.29
30	100	30.75	4.65		4.58	0.07
65	0	19.45	4.71	Yes	4.71	0
114	59.69	5.14	4.74		3.24	1.5
20	44.2	8.29	4.81		4.14	0.67
15	31.15	18.76	4.85		1.45	3.4
82	45.65	17.13	4.86		4.05	0.81
31	100	45.63	4.88		4.58	0.3
19	38.54	4.53	4.93		4.14	0.79

Note: Districts are colored green if they are identified in the “Apportionment Analysis” section of Mr. Fairfax’s report. Districts are colored Red/Blue based on party that won the 2024 election. Districts are colored orange if BVAP is greater than 35% using 2020 US Census Data.



## 7 State Legislative Illustrative Districts

In this section I calculate the same 2024 partisan index for each of the state legislative districts in the two illustrative Maps put forward by Mr. Fairfax as well as for the Enacted House and Senate maps. I also show which party won in each seat in the Enacted House and Senate maps in the eastern portion of the state where the challenged districts are located.

Table 10 displays the partisan index and election results for the 16 state house districts in the eastern region of the state. These are the districts that are altered in some way in the Fairfax Illustrative House maps (either A or B). For each map I show the Democratic partisan index using the 15 statewide elections that occurred in 2024. Each district is colored based on the value of the partisan index. Districts where the partisan index is Democratic-leaning (greater than 50%) are colored blue and those that are Republican-leaning (less than 50%) are colored red. Because the index is the average of 15 statewide races, I also show the number of statewide races where the Democratic candidate won a majority of the two-party vote share. For the Enacted Map, in addition to the partisan index, I also show the actual outcome of the 2024 election in that district by displaying the party that won the seat as well as the vote share for the Democratic and Republican candidates.

The results in Table 10 show that in the Enacted House Map there are six Democratic-leaning districts (37.5% of the 16 considered here in the eastern third of the state). These are House districts 8, 23, 24, 25, 27, and 32. Of those six Democratic-leaning districts, Democratic candidates won the legislative seat in five of the six districts. The one exception is HD-25 where the Republican candidate (Allen Chessser) defeated the Democratic candidate (Lorenza Wilkins) by a mere 461 votes. However, it should be noted that of the 15 statewide races that were also held at the same time in the district, Democratic candidates won a majority of the votes in 11 of those 15 contests. In other words, there were a number of voters who decided to split their tickets and either vote for the Republican candidate for state legislature and the Democratic candidate for other statewide offices, or vice versa for

Table 10: Partisan Lean and 2024 Election Results in State House Districts

District	Fairfax House Map A		Fairfax House Map B		Enacted House Map				
	Democratic Index	Statewide Democratic Wins (of 15)	Democratic Index	Statewide Democratic Wins (of 15)	Democratic Index	Statewide Democratic Wins (of 15)	2024 Winning Party	2024 Democratic Vote Share	2024 Republican Vote Share
1	34.43%	0	41.41%	0	35.83%	0	R	34.94%	65.06%
3	42.52%	1	39.24%	0	40.90%	0	R	38.32%	61.68%
4	36.71%	0	39.18%	0	39.18%	0	R	36.97%	63.03%
5	56.79%	15	56.28%	15	47.57%	0	R	45.84%	54.16%
7	37.19%	0	37.41%	0	45.36%	1	R	42.17%	55.32%
8	54.63%	15	64.02%	15	65.08%	15	D	64.03%	35.97%
9	42.55%	0	47.52%	2	46.68%	1	R	44.05%	55.95%
10	33.35%	0	42.99%	0	42.99%	0	R	39.21%	60.79%
12	60.33%	15	37.29%	0	46.11%	1	R	41.37%	57.28%
13	31.20%	0	31.20%	0	30.50%	0	R	30.11%	69.89%
23	56.61%	15	56.79%	15	58.20%	15	D	56.46%	43.54%
24	62.99%	15	60.47%	15	50.92%	8	D	51.10%	48.90%
25	60.44%	15	60.44%	15	51.49%	11	R	47.86%	48.80%
27	60.86%	15	60.86%	15	60.32%	15	D	100.00%	0.00%
32	48.02%	2	48.02%	2	51.81%	13	D	48.95%	48.42%
79	38.71%	0	34.37%	0	37.75%	0	R	36.76%	63.24%

Note: Districts included in the table are those that are impacted by altered district boundaries in either the Fairfax House Map A or Fairfax House Map B.

reasons related to candidate quality or other campaign-related reasons.<sup>22</sup>

The 2024 partisan index applied to the Fairfax House Map A shows that this map contains seven Democratic-leaning districts in this region of the state. The 2024 partisan index applied to the Fairfax House Map B shows that this map contains six Democratic-leaning districts in this region of the state. If the objective of the illustrative maps is to increase the representation of Black-preferred candidates (who are nearly always Democrats in partisan elections), then Illustrative Map B appears to be equivalent in such representation compared to the Enacted Map. However, Map B decreases the competitiveness of those districts, making it more likely that they will consistently elect Democrats.

Table 11 displays the partisan index and election results for the six state senate districts in the eastern region of the state. These are the districts that are altered in some way in the Fairfax Illustrative Senate maps (either A or B). For each map I show the democratic

<sup>22</sup>One might wonder if the outcome in HD-25 was driven by race. However, voters in the district voted in 6 statewide elections where a Black Democratic candidate ran against a White Republican and the Black candidate won a majority of the votes in the district in 4 of those elections, showing that race is not a good explanation for Wilkins underperformance in the district compared to statewide Democrats' performance in the district.

partisan index using the 15 statewide elections that occurred in 2024. Each district is colored based on the value of the partisan index. Districts where the partisan index is Democratic-leaning (greater than 50%) are colored blue and those that are Republican-leaning (less than 50%) are colored red. Because the index is the average of 15 statewide races, I also show the number of statewide races where the Democratic candidate won a majority of the two-party vote share. For the Enacted Map, in addition to the partisan index, I also show the actual outcome of the 2024 election in that district by displaying the party that won the seat as well as the vote share for the Democratic and Republican candidates.

The results in Table 11 show that in the Enacted Senate Map there is one Democratic-leaning district, SD-5, which has a Democratic partisan index of 56.4%. In this district the Democratic senate candidate won and all 15 of the statewide Democratic candidates won a majority of the vote in the district.

Of the remaining five Republican-leaning districts, one is quite competitive. In SD-11 the Republican state senate candidate and longtime incumbent, Lisa Barnes, won with 51.3% of the vote. However, across the 15 statewide elections, six Democratic candidates won a majority of the vote in the districts, indicating that the right Democratic candidate with the right message can win in the district.

The 2024 partisan index applied to the Fairfax Senate Map A shows that this map contains two Democratic-leaning districts in this region of the state (SD-2 and SD-5, both of which are majority BVAP). The 2024 partisan index applied to the Fairfax Senate Map B shows that this map contains two Democratic-leaning districts in this region of the state (SD-2 and SD-5, with SD-2 being majority BVAP) and another very competitive Republican-leaning district (SD-11).

Outside of these six senate districts, it is also informative to note that SD-18, which borders SD-11 and takes in portions of Wake County and all of Granville County, has a partisan index similar to SD-11 but elected a Democrat in the state senate race (Terence Everitt) unlike SD-11, which elected a Republican. The point of noting this is to say that

Table 11: Partisan Lean and 2024 Election Results in State Senate Districts

District	Fairfax Senate Map A		Fairfax Senate Map B		Enacted Senate Map				
	Democratic Index	Statewide Democratic Wins (of 15)	Democratic Index	Statewide Democratic Wins (of 15)	Democratic Index	Statewide Democratic Wins (of 15)	2024 Winning Party	2024 Democratic Vote Share	2024 Republican Vote Share
1	34.81%	0	34.77%	0	43.50%	0	R	42.79%	57.21%
2	57.24%	15	57.24%	15	43.29%	1	R	41.81%	56.05%
3	41.81%	1	42.23%	0	41.66%	0	R	40.01%	59.99%
4	45.55%	1	42.38%	0	46.46%	1	R	44.88%	55.12%
5	60.73%	15	56.39%	15	56.39%	15	D	55.08%	44.92%
11	45.86%	1	49.93%	6	49.82%	6	R	48.71%	51.29%

Note: Districts included in the table are those that are impacted by altered district boundaries in either the Fairfax Senate Map A or Fairfax Senate Map B.

there are always partisan swings in election results. Even neighboring districts with similar partisan leans may occasionally elect members of different parties. Both SD-11 and SD-18 are swing districts, which indicates that they will occasionally swing from one party to the other. In fact, in both districts statewide Democrats won 6 of the 15 statewide races in each district in 2024. In 2026, which will be a midterm election with a Republican president, it is possible that both of these districts will swing toward Democrats as is often the case in midterm elections where the incumbent president's party suffers losses at both the federal and state level.<sup>23</sup>

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<sup>23</sup>Rogers, Steven. "Electoral accountability for state legislative roll calls and ideological representation." American political science review 111, no. 3 (2017): 555-571.

Dated: March 17, 2025

Michael Barber

Signed: \_\_\_\_\_